NEW PROGRAM PROPOSAL: ***ACTION***
MS IN APPLIED COMPUTING **Agenda Item D-4**
EASTERN KENTUCKY UNIVERSITY **July 17, 2000**

Recommendation:

That the Master of Science in Applied Computing proposed by Eastern Kentucky University be approved and registered in CIP 11.0701 (Computer Science).

Rationale:

- Demand for applied computing professionals is high and continues to grow in Eastern's service region and throughout the state.
- The proposed program is aimed at business and industry computing professionals as well as secondary school, community, and technical college educators seeking to improve their job skills.
- The proposed program is designed to meet the varied needs of prospective students through three tracks in software engineering, business computing, and industrial computing.
- Delivery of the proposed program is designed for student convenience: it will be offered on Eastern's main campus and on extended campus sites; classes will be held in the evenings and on Saturdays; course materials will be available on the web; and, as the need arises, courses will be delivered via the Kentucky Commonwealth Virtual University.

Background:

Using the new Kentucky Postsecondary Program Proposal System (KPPPS), Eastern Kentucky University posted the proposed program to the Council's website. It was reviewed without objection by the other public and private universities in Kentucky and the Kentucky Community and Technical College System. Because the proposed program is not in Eastern's program band (program areas in which the EKU Board of Directors has ultimate authority for approving programs), it is subject to full review and approval by the Council.

An executive summary submitted by Eastern Kentucky University is attached.

Staff Preparation by Barbara Cook

EXECUTIVE SUMMARY

EASTERN KENTUCKY UNIVERSITY
MASTER OF SCIENCE IN APPLIED COMPUTING

Eastern Kentucky University (EKU) requests approval of Master of Science degree in Applied Computing to be jointly implemented by the Department of Computer Science (The Computer Science department will become independent effective July 1, 2000), the Department of Technology, the Department of Accounting, Finance and Information Systems, and the Department of Management, Marketing and Administrative Communication effective August, 2000.

Program Description

The proposed program is an interdisciplinary graduate program with options in Software Engineering, Business Computing, and Industrial Computing, designed for the people in the Eastern Kentucky University's (EKU) service area. The proposed program is tailored to serve both computing professionals working in business/industry sites who seek an advanced degree to improve their job skill, and the computer teachers/lab managers in the secondary schools, community colleges and technical schools within the EKU's service area. Courses in the proposed program will be offered during evenings and on weekends. This provides an educational opportunity for students who are unable to attend daytime classes. Currently, there is no evening program in applied computing in this region.

The proposed Master of Science in Applied Computing degree program consists of a minimum of 36 graduate hours. A minimum of 50% of graduate hours must be at the 800 level. Program candidates may choose from three applied computing options. The core requirements, which all the program candidates must take, consist of 18 credit hours of Computer Science courses. Each specialization option requires 12 credit hours in one of the options of Software Engineering, Business Computing, or Industrial Computing. The remaining six credit hours can be selected from any of the courses not required in the core or the chosen option. The academic record and work experience of each applicant will be evaluated to determine whether additional prerequisite course work is required.

At present the students who have completed undergraduate programs in computer information systems (CIS), management information systems (MIS), computer science, or manufacturing technology at any of the universities in the state of Kentucky or other states can be admitted to the program, provided they meet the graduate school requirements at Eastern Kentucky University.

Students may transfer credits for courses taken at another institution. Courses requested to be transferred will be reviewed by the departmental graduate committee for approval following the University guidelines for graduate credit transfer.

The proposed program is consistent with the mission of Eastern Kentucky University to support the needs of Kentucky's business community; respond to appropriate societal needs and public policy objectives; and meet the region's technical education needs.

Statement of need and demand for the program

With the substantial business and industrial development in the region, the demand for applied computing professionals is very high and continues to grow. The proposed program emphasizes computer software development skills needed in the business and industrial environment of the region. The program's combination of computing and business/industrial skills is particularly applicable to the needs of computing consultants in the region, many of whom work in contracting positions.

Job opportunities for program graduates

The Bureau of Labor Statistics expects job opportunities in Computing to grow "faster than average" to "much faster than average" through the year 2006 (See http://stats.bls.gov/oco/ocos110.htm, http://stats.bls.gov/oco/ocos042.htm.) This report also emphasizes that, due to the changing nature of computers, nearly constant study is necessary to remain current in the field. One section on computer science states: "Since employers look for the most qualified applicants possessing a high level of technical expertise, individuals with an advanced degree in computer science, management information systems (MIS), computer engineering, or an MBA with a concentration in information systems should enjoy very favorable employment prospects."

Plans for delivery through distance learning technology

As with many graduate degree programs, it is anticipated that at least one-half of Masters of Science in Applied Computing students will likely pursue their graduate education on a part-time basis, primarily due to employment obligations and family responsibilities, and fiscal constraints. Hence, we have designed a cost-effective program. EKU's main campus and extended campus sites make it possible for students in central, southern, and eastern parts of the state to attend classes with relative ease. Additionally, EKU is a leader in distance learning programs such as the Kentucky Tele-Linking Network (KTLN). EKU's established use of technology and its cooperation with Kentucky Commonwealth Virtual University (KCVU) further enhances the accessibility of these courses to prospective students. At this time we have not made specific plans for any specific course to be delivered via KTLN and/or WEB. However, all of the courses in the program will be WEB enhanced; that is, all the material for the courses will be available through Internet access. Our faculty are experienced in teaching courses through distance learning technology. Therefore, as the need arises and the evaluation of our program indicates a need for delivery through distance learning technology, we will be ready to do so.

Resources

Present facilities at the main campus of Eastern Kentucky University are adequate for the implementation of the proposed master's degree program. Current facilities include four computer labs housing more than 80 PCs and a multimedia lab in the Wallace building. The

EKU library also houses a 24-hour computer lab available to students. The Computer Science Accreditation Board (CSAB) assessed the current computer labs during their visit in September 1999 and found the facilities appropriate and adequate.

The EKU libraries have a wide variety of resources to support the proposed MS degree. The library currently subscribes to 64 journals in the Mathematics, Statistics, and Computer Science areas, 38 journals in the Technology area, 110 journals in the Business area, and 21 journals in the general area of Information Studies.

Current faculty comprising the Computer Science unit of the Department of Mathematics, Statistics, and Computer Science will implement the proposed master's degree program. (Note: The Computer Science unit will become an independent department effective July 1, 2000.) All Computer Science faculty members are qualified to teach the Computer Science courses in the proposed MS degree. They will be supplemented by faculty from the departments of Technology, Accounting/Finance/Information Systems, and Management/Marketing/ Administrative Communication. The faculty from these other departments will teach the courses for the Business Computing and the Industrial Computing Options of the MS degree.